

1.0 Reference and Address			
Report Number	241012004GZU-001	Original Issued: 14-Jan-2025	Revised: None
Standard(s)	<p>Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use Part 1: General Requirements [CSA C22.2#61010-1-12:2012 Ed.3+U1;U2;A1;U3]</p> <p>Electrical Equipment for Measurement, Control, and Laboratory Use; Part 1: General Requirements [UL 61010-1:2012 Ed.3+R:06Jun2023]</p> <p>Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 2-033: Particular Requirements for Hand-Held Multimeters for Domestic and Professional Use, Capable of Measuring Mains Voltage [UL 61010-2-033:2020 Ed.2]</p> <p>Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 2-033: Particular Requirements for Hand-Held Multimeters and Other Meters, for Domestic and Professional Use, Capable of Measuring Mains Voltage [CSA C22.2#61010-2-033:2020 Ed.2]</p>		
Applicant	Uni-Trend Technology (China) Co Ltd	Manufacturer 1	Uni-Trend Technology(China) Co., Ltd
Address	No. 6, Gong Ye Bei 1st Road, Songshan Lake National High-Tech Industrial Development Zone, DONGGUAN CITY Guangdong Province 523808	Address	No. 6, Gong Ye Bei 1st Road, Songshan Lake National High-Tech Industrial Development Zone, DONGGUAN CITY Guangdong Province 523808
Country	CHINA	Country	CHINA
Contact	Jim Mi	Contact	Jim Mi
Phone	0769-85723888-662	Phone	0769-85723888-662
FAX	--	FAX	--
Email	jim@uni-trend.com.cn	Email	jim@uni-trend.com.cn

2.0 Product Description	
Product	Industrial Digital Multimeter
Brand name	UNI-T
Description	UT197 is a general high-precision true RMS handheld digital multimeter.
Models	UT197
Model Similarity	N/A
Ratings	Powered: 3 x 1.5Vdc AA battery Measurement Category: CAT IV 1000V
Other Ratings	NA

3.0 Product Photographs

Photo 1 - Front view

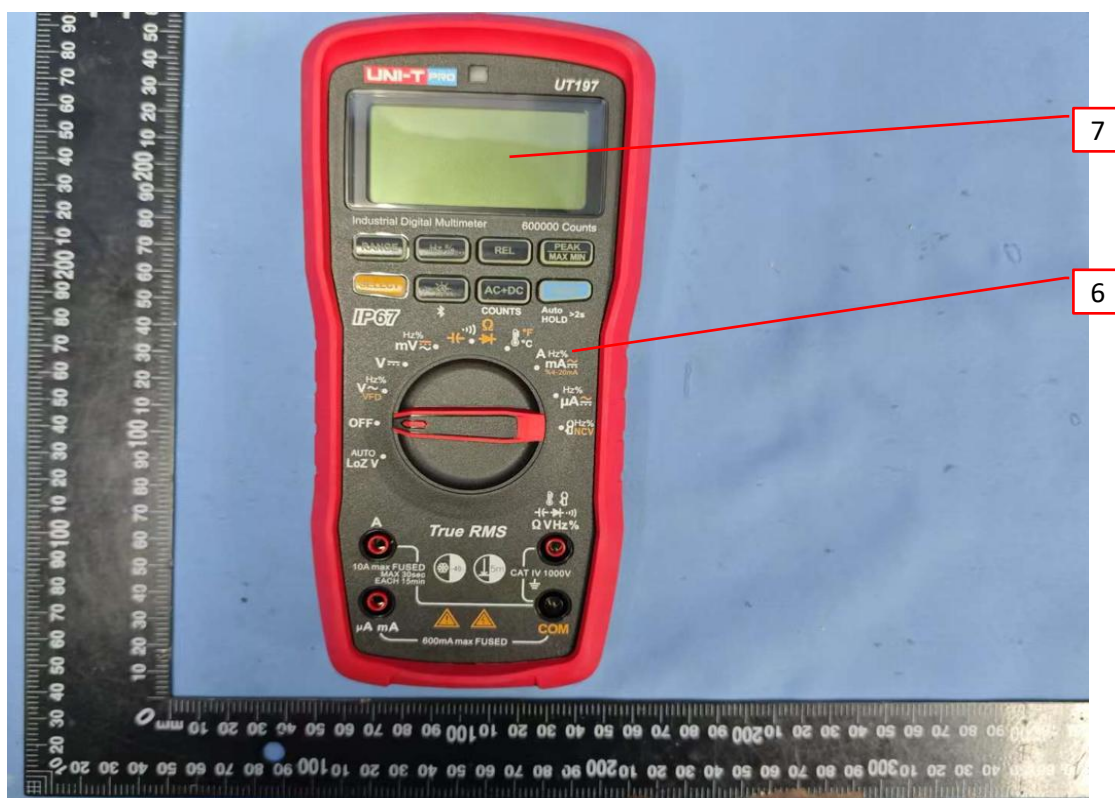


Photo 2 - Rear view



3.0 Product Photographs

Photo 3 - Rear enclosure



Photo 4 - Internal view 1



3.0 Product Photographs

Photo 5 - Internal view 2

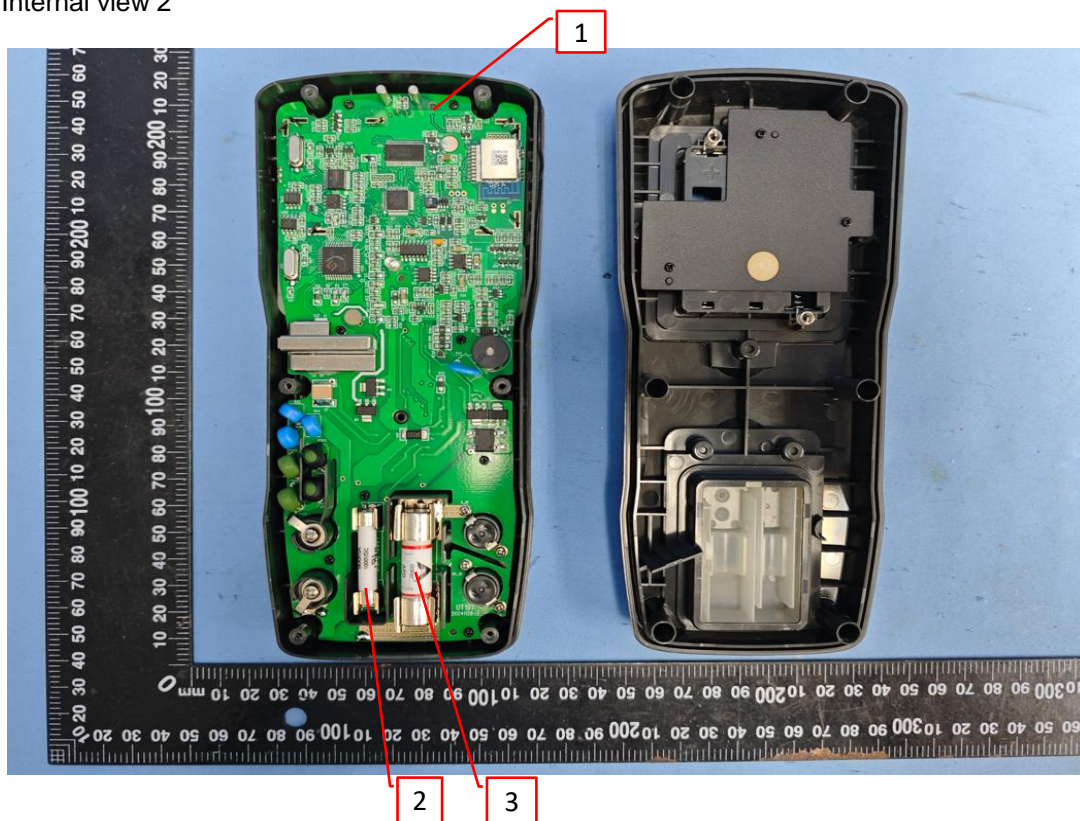
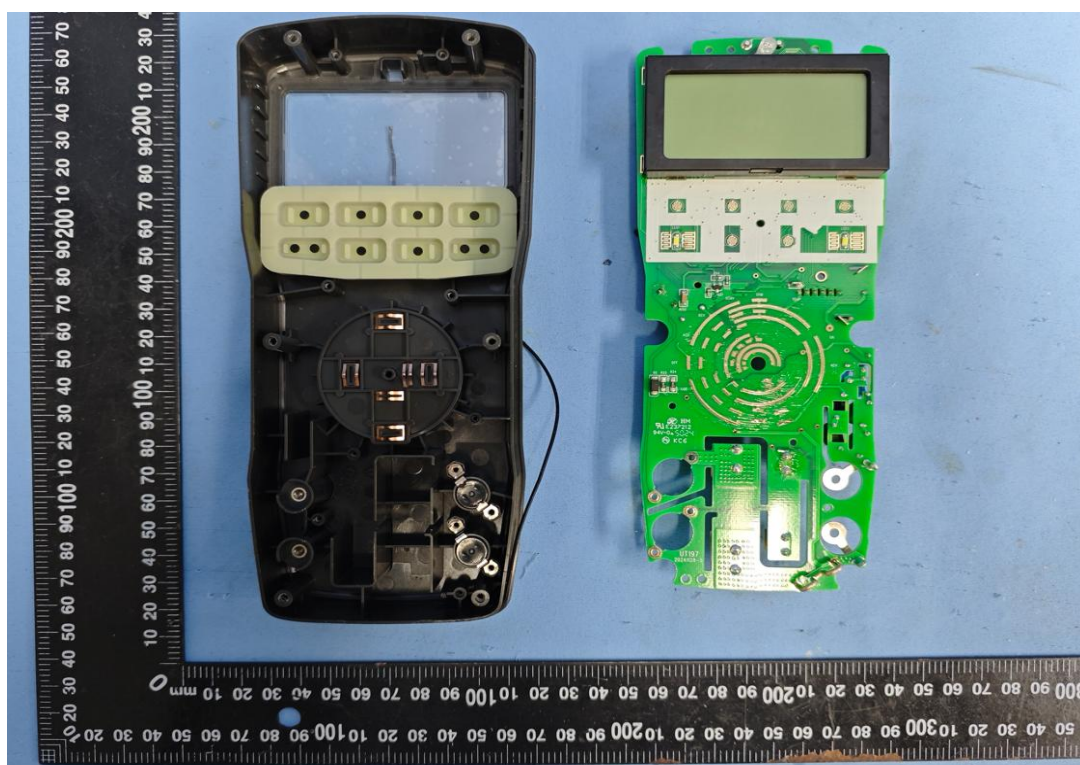
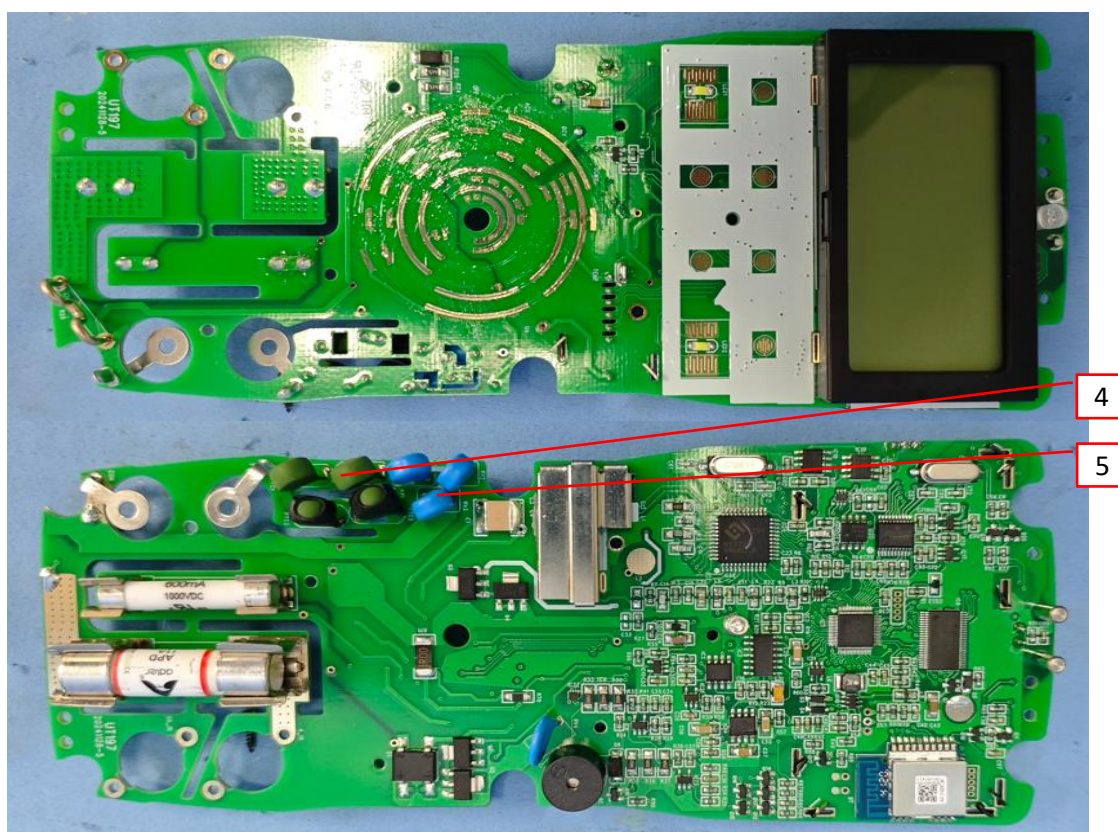


Photo 6 - Internal view 3



3.0 Product Photographs

Photo 7 - PCB view



4.0 Critical Components						
Photo #	Item no. ¹	Name	Manufacturer/ trademark ²	Type / model ²	Technical data and securement means	Mark(s) of conformity ³
5	1	PCB	SHENZHEN HUA YAN HUI HAI ELECTRONIC CO LTD	HD	V-0, 130°C	UR
			Various	Various	V-0, 130°C	UR
5	2	Fuse 1	EUGARD CO.,LTD	632.000.0.6	FF600mA, 1000V, Φ6X32mm, Interrupting Rating 10KA	UR
			DONGGUAN BETTER ELECTRONICS TECHNOLOGY CO LTD	693 Series	FF600mA, 1000V, Φ6X32mm, Interrupting Rating 10KA	UR
5	3	Fuse 2	ADLER Elektrotechnik Leipzig GmbH	APD Series	FF11A, 1000V, Φ10X38mm, Interrupting Rating 30KA	UR
			HOLLYLAND CO LTD	HC10aR	FF11A, 1000V, Φ10X38mm, Interrupting Rating 30KA	UR
7	4	PTC	SHENZHEN WEILIN HI-TECH CO LTD	WMZ12A-102X	1.1KΩ±20%, Withstand 1000V	UR
7	5	Varistor	CENTRA SCIENCE CORP	CNR-07V821K	Varistor Voltage 738 ~ 902, Withstand surge Current 1750A	UR
			BESTBRIGHT ELECTRONICS CO LTD	821KD07X	Varistor Voltage 675 ~ 825, Withstand surge Current 1750A	UR
1	6	Enclosure	SABIC INNOVATIVE PLASTICS B V	C2950	PC/ABS, 85°C, V-0, min thickness: 1.6mm, material group I	UR
			SHANGHAI CHANGWEI JINCI ENGINEERING PLASTICS CO LTD	PC/ABS5288F	PC/ABS, 60°C, V-0, min thickness: 1.6 mm, material group III	UR
			CHI MEI CORPORATION	PC-6600	PC, 130°C, min thickness: 1.6 mm, V-0, material group III	UR
1	7	Transparent Cover	SABIC INNOVATIVE PLASTICS US L L C	940A	PC, V-2, 130°C, min thickness: 1.5mm, material Group III	UR
			Covestro Deutschland AG [PC Resins]	2405+(z)	PC, V-2, 125°C, min thickness: 1.5mm, material Group III	UR

NOTES:

- 1) Not all item numbers are indicated (called out) in the photos, as their location is obvious.
- 2) "Various" means any type, from any manufacturer that complies with the "Technical data and securement means" and meets the "Mark(s) of conformity" can be used.
- 3) Indicates specific marks to be verified, which assures the agreed level of surveillance for the component. "NR" - indicates Unlisted and only visual examination is necessary. "See 5.0" indicates Unlisted components or assemblies to be evaluated periodically refer to section 5.0 for details.

5.0 Critical Unlisted CEC Components

No Unlisted CEC components are used in this report.

6.0 Critical Features

Recognized Component - A component part, which has been previously evaluated by an accredited certification body with restrictions and must be evaluated as part of the basic product considering the restrictions as specified by the Conditions of Acceptability.

Listed Component - A component part, which has been previously Listed or Certified by an accredited Certification Organization with no restrictions and is used in the intended application within its ratings.

Unlisted Component - A part that has not been previously evaluated to the appropriate designated component standard. It may also be a Listed or Recognized component that is being used outside of its evaluated Listing or component recognition.

Critical Features/Components - An essential part, material, subassembly, system, software, or accessory of a product that has a direct bearing on the product's conformance to applicable requirements of the product standard.

Construction Details - For specific construction details, reference should be made to the photographs and descriptions. All dimensions are approximate unless specified as exact or within a tolerance. In addition to the specific construction details described in this Report, the following general requirements also apply.



1. Spacing -
The clearance and creepage distance between V and COM terminal are 14.0 mm and 14.0 mm for basic insulation.
The clearance and creepage distance between live parts and accessible part are 23.9 mm and 23.9 mm for reinforce insulation.
2. Mechanical Assembly - Components such as switches, fuseholders, connectors, wiring terminals and display lamps are mounted and prevented from shifting or rotating by the use of lockwashers, starwashers, or other mounting format that prevents turning of the component.
3. Corrosion Protection - All ferrous metal parts are protected against corrosion by painting, plating or the equivalent.
4. Accessibility of Live Parts - All uninsulated live parts in primary circuitry are housed within a non-metallic enclosure constructed with no openings other than those specifically described in Sections 4 and 5.
5. Grounding - This product is not provided with a means of grounding as it is a double insulation.
6. Internal Wiring - Internal wiring is routed away from sharp or moving parts. Internal wiring leads terminating in soldered connections are made mechanically secure prior to soldering. Recognized Component separable (quick disconnect) connectors of the positive detent type, closed loop connectors, or other types specifically described in the text of this report are also acceptable as internal wiring terminals. At points where internal wiring passes through metal walls or partitions, the wiring insulation is protected against abrasion or damage by plastic bushings or grommets. Refer to section 4.0 for the specification of the wirings.
7. Markings - The product is marked as follows:
 - Applicant or brand name
 - Model number
 - Electrical ratings
8. Cautionary Markings - Refer to Illustration 1 of section 7.0 for details.
9. Installation, Operating and Safety Instructions - Instructions for installation and use of this product are provided by the manufacturer.
Manual vision: 2024

7.0 Illustrations

Illustration 1 - Warning markings on rear panel



8.0 Test Summary					
Evaluation Period	12 Oct 2024 - 14 Jan 2025		Project No.	241012004GZU	
Sample Rec. Date	12-Oct-2024	Condition	Prototype	Sample ID.	S241012004-001~009
Test Location	Intertek Testing Services Shenzhen Ltd. Guangzhou Branch Room101/301/401/102/202/302/402/502/602/702/802, No. 7-2, Caipin Road, Huangpu District, Guangzhou, Guangdong, China				
Test Procedure	Testing Lab				
Determination of the result includes consideration of measurement uncertainty from the test equipment and methods. The product was tested as indicated below with results in conformance to the relevant test criteria.					
The following tests were performed:					
Test Description	UL 61010-1:2012 Ed.3+R:06Jun2023 CSA C22.2#61010-1-12:2012 Ed.3+U1;U2;A1;U3 Clause		UL 61010-2-033:2020 Ed.2 CSA C22.2#61010-2-033:2020 Ed.2 Clause	--	
Fault condition	4.4.4		--	--	
Marking Durability Test	5.3		--	--	
Permissible limits for accessible part –normal condition	6.3.1		--	--	
Permissible limits for accessible part –Fault condition	6.3.2		--	--	
Creepage distance and clearance	6.7		--	--	
Voltage test and impulse test	6.8		--	--	
Static test	8.2.1		--	--	
Drop test	8.3		--	--	
Equipment temperature limit (normal operation)	10.1		--	--	
Equipment temperature limit (abnormal operation)	10.1		--	--	
Equipment RATED with a degree of ingress protection (IP code)	11.6				
Non-metallic enclosure	10.5.2		--	--	
Protection by a certified overcurrent protection device	--		101.3.2	--	
Protection by uncertified current limitation devices or by impedances	--		101.3.3	--	
Protection against MAINS overvoltages	--		101.4	--	
Battery level	--		102.2	--	
Over-range voltages	--		102.3	--	
Permanent overvoltages	--		102.4	--	

8.1 Signatures			
A representative sample of the product covered by this report has been evaluated and found to comply with the applicable requirements of the standards indicated in Section 1.0.			
Completed by:	Eric Deng	Reviewed by:	Justin He
Title:	Engineer	Title:	Manager
Signature:		Signature:	

9.0 Correlation Page For Multiple Listings

The following products, which are identical to those identified in this report except for model number and Listee name, are authorized to bear the ETL label under provisions of the Intertek Multiple Listing Program.

BASIC LISTEE	Uni-Trend Technology (China) Co Ltd
Address	No. 6, Gong Ye Bei 1st Road, Songshan Lake National High-Tech Industrial Development Zone, DONGGUAN CITY Guangdong Province 523808
Country	CHINA
Product	Industrial Digital Multimeter

MULTIPLE LISTEE 1	None
Address	
Country	
Brand Name	
ASSOCIATED MANUFACTURER	
Address	
Country	
MULTIPLE LISTEE 1 MODELS	BASIC LISTEE MODELS

MULTIPLE LISTEE 2	None
Address	
Country	
Brand Name	
ASSOCIATED MANUFACTURER	
Address	
Country	
MULTIPLE LISTEE 2 MODELS	BASIC LISTEE MODELS

MULTIPLE LISTEE 3	None
Address	
Country	
Brand Name	
ASSOCIATED MANUFACTURER	
Address	
Country	
MULTIPLE LISTEE 3 MODELS	BASIC LISTEE MODELS

10.0 General Information

The Applicant and Manufacturer have agreed to produce, test and label ETL Listed products in accordance with the requirements of this Report. The Manufacturer has also agreed to notify Intertek and to request authorization prior to using alternate parts, components or materials.

COMPONENTS

Components used shall be those itemized in this Intertek report covering the product, including any amendments

LISTING MARK

The ETL Listing mark applied to the products shall either be separable in form, such as labels purchased from Intertek, or on a product nameplate or other media only as specifically authorized by Intertek. Use of the mark is subject to the control of Intertek.

The mark must include the following four items:

- 1) applicable country identifiers "US" and/or "C" or "US", "C" and "EU"
- 2) the word "Listed" or "Classified" or "Recognized Component" (whichever is appropriate)
- 3) a control number issued by Intertek
- 4) a product descriptor that identifies the standards used for certification. Example:

For US standards, the words, "Conforms to" shall appear with the standard number along with the word, "Standard" or "Std." Example: "Conforms to ANSI/UL Std. XX."

For Canadian standards, the words "Certified to CAN/CSA Standard CXX No. XX." shall be used, or abbreviated, "Cert. to CAN/CSA Std. CXX No. XX."

Can be used together when both standards are used.

If all standards on the ATM have the same standard title, the shared title or its abbreviation may be used in place of the examples above. Example: "Medical Electrical Equipment" or "MEE"; "Information Technology Equipment" or "ITE"; "Audio/Video Information And Communication Technology Equipment" or "A/V ICTE".

Note: A facsimile must be submitted to Intertek, Attn: Follow-up Services for approval prior to use.

The facsimile need not have a control number. A control number will be issued **after signed Certification Agreements** have been received by the Follow-up Services office, approval of the facsimile of your proposed Listing Mark, satisfactory completion of the Listing Report, and scheduling of a factory assessment in your facility.

MANUFACTURING AND PRODUCTION TESTS

Manufacturing and Production Tests shall be performed as required in this Report.

FOLLOW-UP SERVICE

Periodic unannounced audits of the manufacturing facility (and any locations authorized to apply the mark) shall be scheduled by Intertek. An audit report shall be issued after each visit. Special attention will be given to the following:

1. Conformance of the manufactured product to the descriptions in this Report.
2. Conformance of the use of the ETL mark with the requirements of this Report and the Certification Agreement.
3. Manufacturing changes.
4. Performance of specified Manufacturing and Production Tests.

In the event that the Intertek representative identifies non-conformance(s) to any provision of this Report, the Applicant shall take one or more of the following actions:

1. Correct the non-conformance.
2. Remove the ETL Mark from non-conforming product.
3. Contact the issuing product safety evaluation center for instructions.

10.1 Evaluation of Unlisted Components

Because Unlisted Components are uncontrolled, and they do not fall under a third party follow up program, Intertek may require these components to be tested and/or evaluated at least once annually, more often for certain components, as part of the independent certification process. The Unlisted Components in Section 5.0 require testing and/or evaluation as indicated.

The Applicant will be notified, in writing, via the applicable contact methods, as defined in Section 1.0, when these components must be selected and sent to Component Evaluation Center (CEC) for re-evaluation.

Due to particular testing requirements, some components may be requested to be shipped to specific labs. Thus, specific shipment destination(s) for each sample will be provided in the written notification.

Managing CEC Location:

Intertek Testing Services Shenzhen Limited Guangzhou Branch

ETL Component Evaluation Center

Room 101/301/401/102/202/302/402/502/602/702/802, No. 7-2, Caipin Road, Huangpu
Guangzhou, Guangdong, China

Attn: Ms. Joey Kuang

Sample Disposition: Due to the destructive nature of the testing, all samples will be discarded at the conclusion of testing unless, the manufacturer specifically requests the return of the samples. The request for return must accompany the initial component shipment.

11.0 Manufacturing and Production Tests

The manufacturer agrees to conduct the following Manufacturing and Production Tests as specified:

Required Tests

None

The following changes are in compliance with the declaration of Section 8.1:

ED 16.3.15 (1-Jul-2022) Mandatory